249-189

CATALOG NO. MF-1

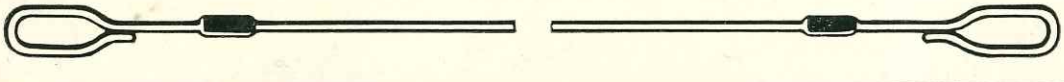
SYMONS PLYWOOD FORMS IN MAGNESIUM FRAMES

A QUALITY PRODUCT

PRECISION MADE

WEIGHS 3 POUNDS PER SQ. FOOT

Patent Nos. 2236616, 2310669, 2395204, 2433934, 2449864. Others Pending.

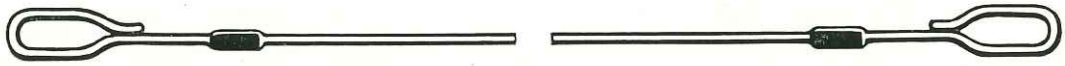


SYMONS CLAMP & MANUFACTURING COMPANY
4249 DIVERSEY AVENUE • Phone Dickens 2-5141 • CHICAGO 39, ILLINOIS

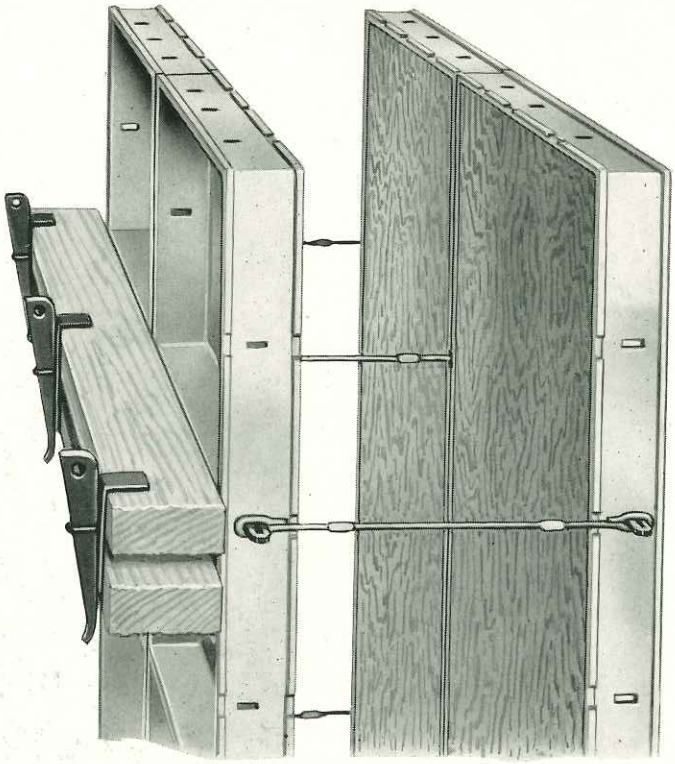
SYMONS PLYWOOD FACED FORMS IN MAGNESIUM FRAMES
WEIGH LESS THAN 3 LBS. PER SQUARE FOOT

Exclusive Features

- ✓ **Does not swell when wet, or shrink when dry**
- ✓ **Does not rust**
- ✓ **Precision made**
- ✓ **Forms match up with blue print right on the line**
- ✓ **Forms automatically spaced by ties**
- ✓ **No entangling wires or bands to interfere with stripping**
- ✓ **No holes in plywood**



Symons high carbon round tie breaks 1" back with half turn.

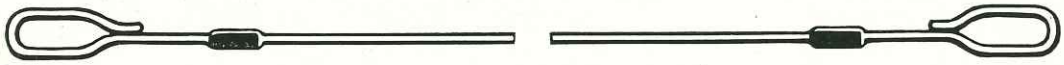


The plywood edges are completely protected by the magnesium frame. See Figs. 5 and 6 below.

No wearout to frame. Plywood facing easily renewed.

The tie rods are anchored from the sides of the panel. There is no fishing through for tie opening on opposite side.

The Symons panel uses a round tie with easy breakback. So far as we know, it is the only one that uses a magnesium frame, a very light metal to which concrete will not easily adhere and that weighs only ¼ as much as steel.



A round tie has a decided advantage in the breakback feature. In the Symons tie, you have only to run one of the wedges through the loop in the end, give a half turn, and tie snaps at point of greatest resistance, which is the beginning of the flat part in the tie, one inch back from concrete surface.

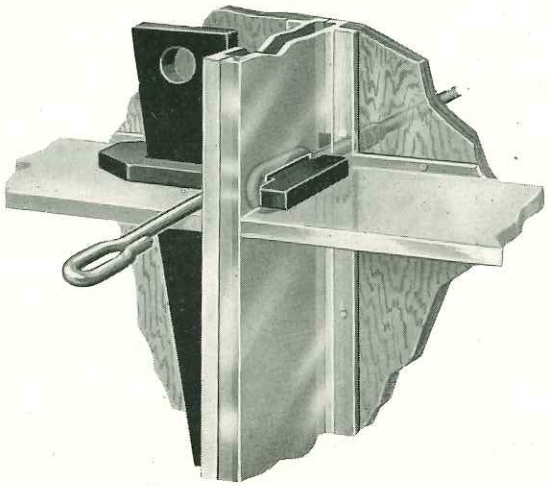


Fig. 5

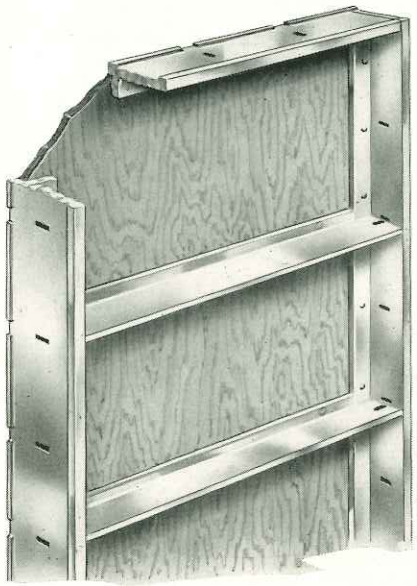
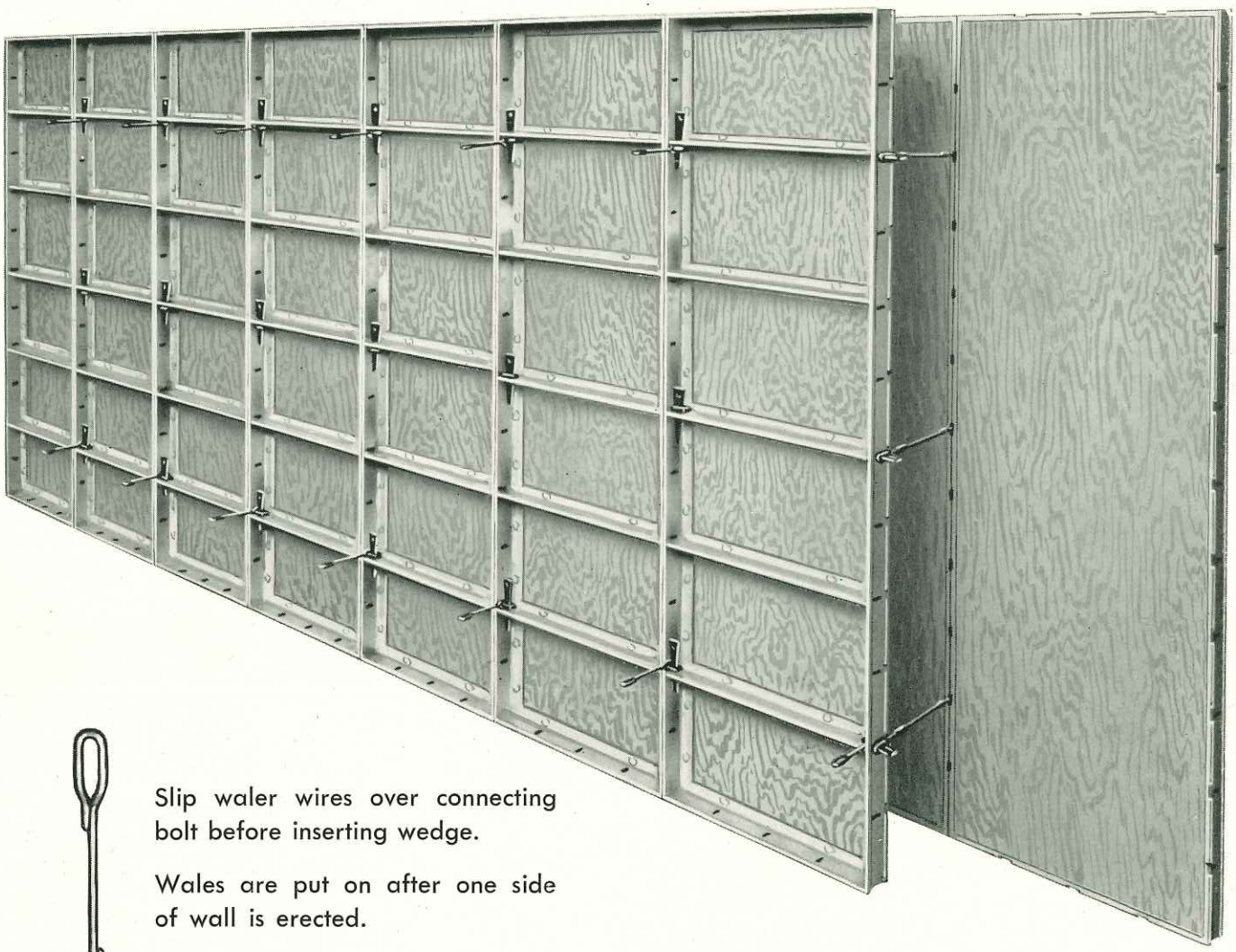


Fig. 6

3/7/50 - Light - Symons Clamp & Mfg. Co.

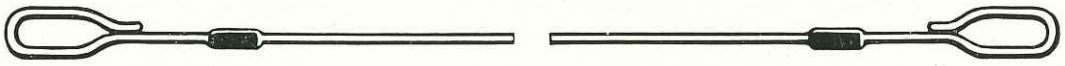
Symons plywood faced panels in magnesium frames are 2′ wide and are made in lengths 4′, 6′, 7′ and 8′ long. Fillers are made in any width required. Standard widths are 14″, 16″, 18″, and 20″. See Page 12. 2″ fillers are made from a piece of 2″ lumber cut 2½″ wide. 1″ fillers are made from 1″ boards cut 2½″ wide.



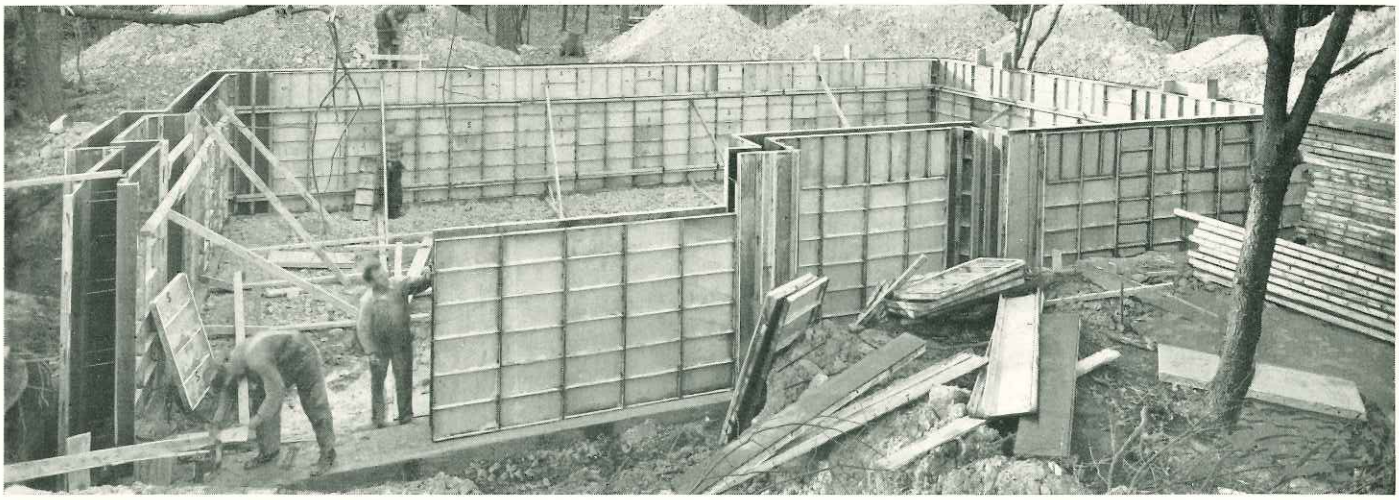
LINER OR
WALE TIE

Slip waler wires over connecting bolt before inserting wedge.

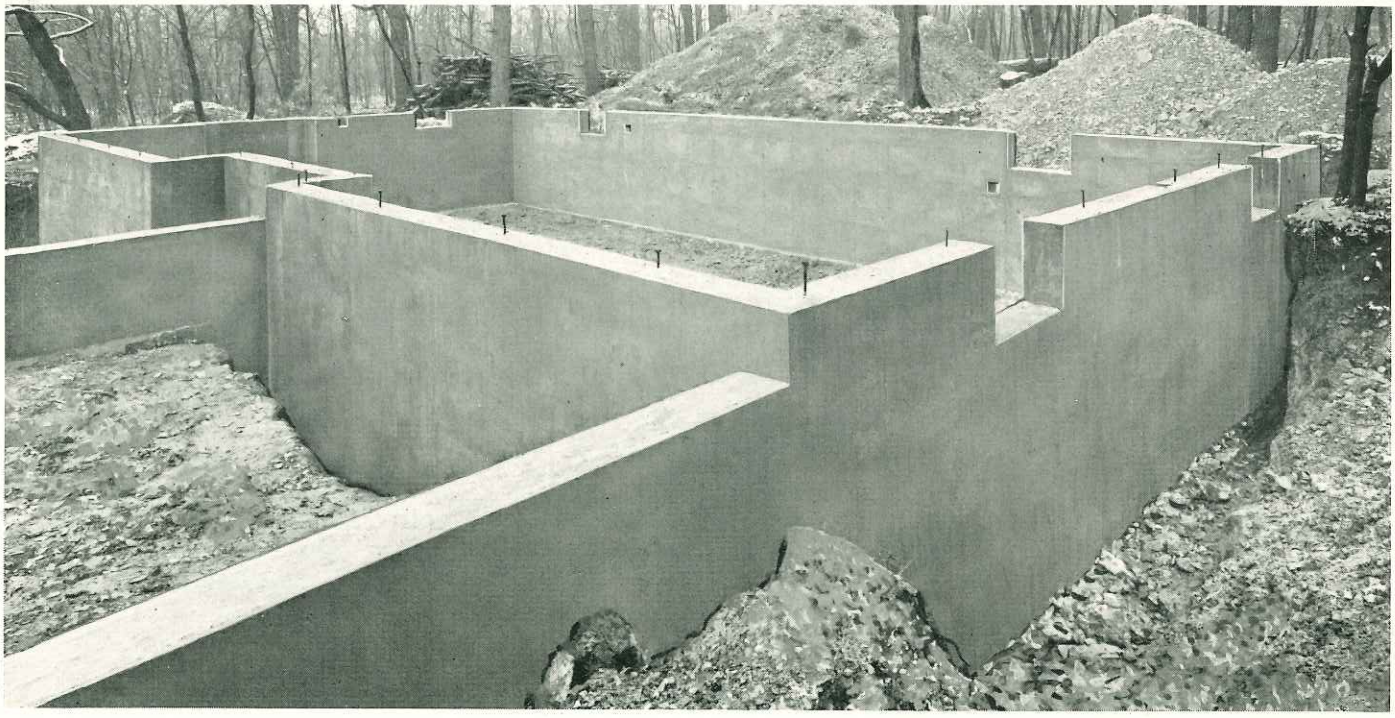
Wales are put on after one side of wall is erected.



Symons high carbon round tie acts as spreader and breaks back 1″ with half turn. Pass a wedge through loop and give half turn. DO NOT BREAK BACK TIES UNTIL CONCRETE IS FULLY SET.



In this job there were used both all-magnesium panels and plywood faced panels in magnesium frames, about an equal number of each. The two kinds are interchangeable and from a distance you do not distinguish the difference.



The same job as above after stripping the forms. Note the dividing lines are barely visible. Complicated jobs are made easy with these forms.

THE PILASTER — TWO METHODS OF CONSTRUCTION

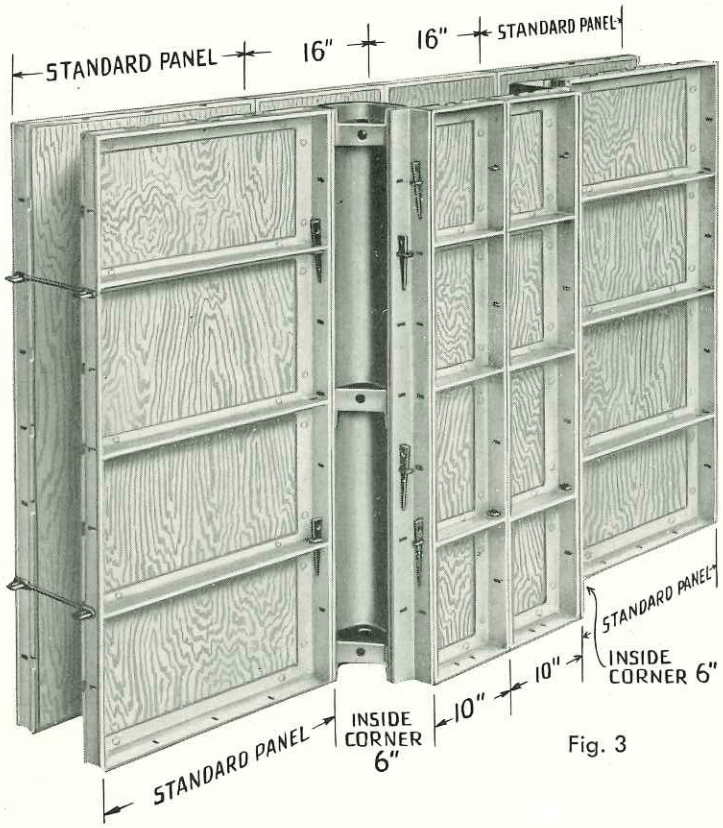


Fig. 3

In the set-up, Fig. 3, there were used in the projecting part of the pilaster 2 inside corner pieces, Fig. 1, Page 6, and 2 outside corners, Fig. 2, Page 6. Also, two 10" fillers (pilaster being 20" wide). Opposite these parts, there were used two 16" fillers (the inside corner pieces being 6" wide, plus a 10" filler, making 16" to center, 32" total).

For variation in width you would, of course, use different size fillers.

If the pilaster projects more than 6" from wall, you insert fillers of suitable width. If pilaster projects less than 6" from wall, make bulkhead of required thickness and insert back of the 10" fillers.

In the set-up, Fig. 4, there were used 2 inside corner pieces and 2 outside corner pieces in the same way as in Fig. 3, making 12". Also used were one 16" filler and two 2" fillers as shown, 20"; total 32". Opposite these parts were used two 8" fillers and one 16" filler (32" total). The 8" fillers used match with the inside corner pieces which are 6" wide, plus the 2" filler, making 8"; total 32".

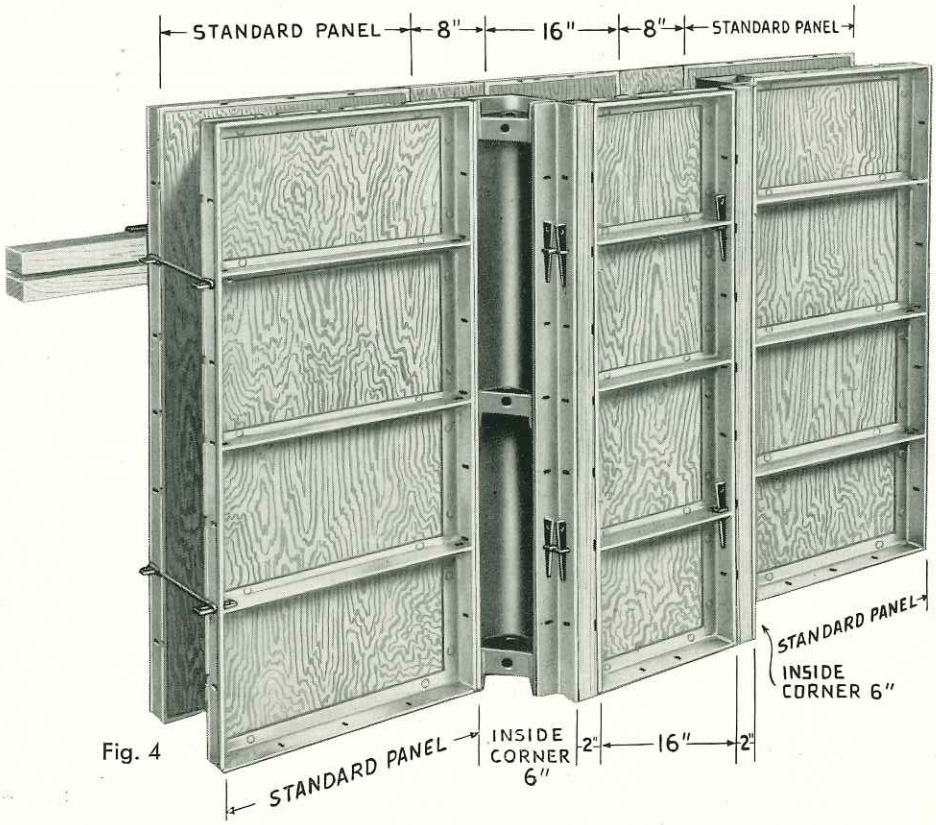


Fig. 4

THE CORNER

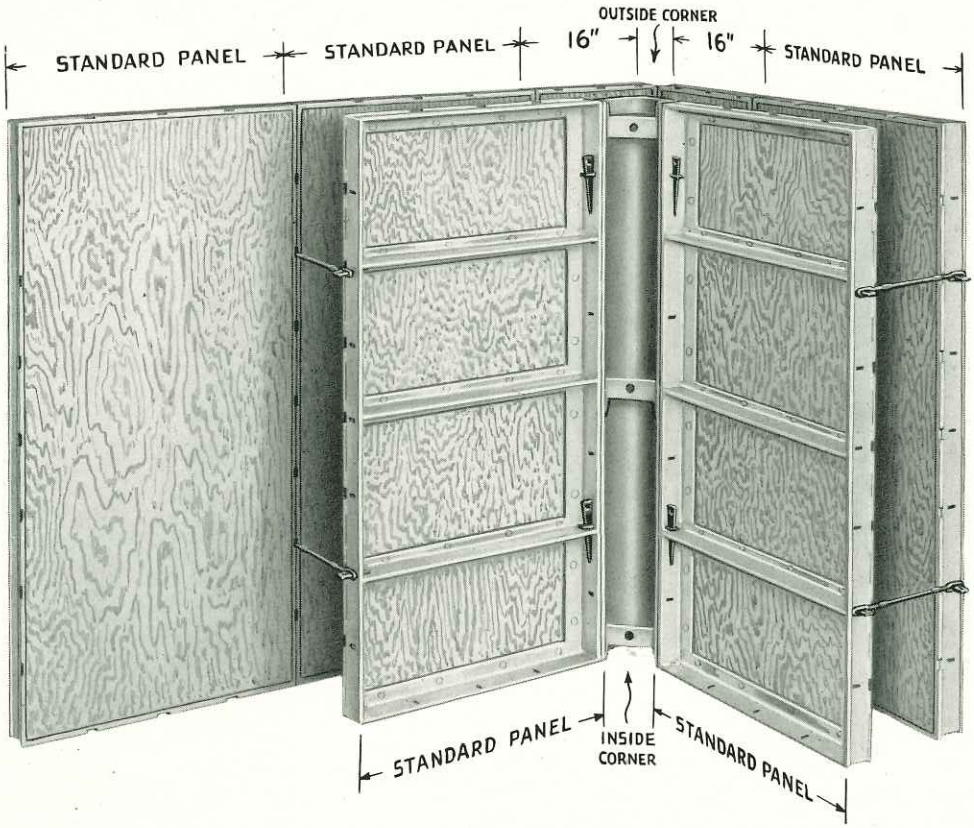
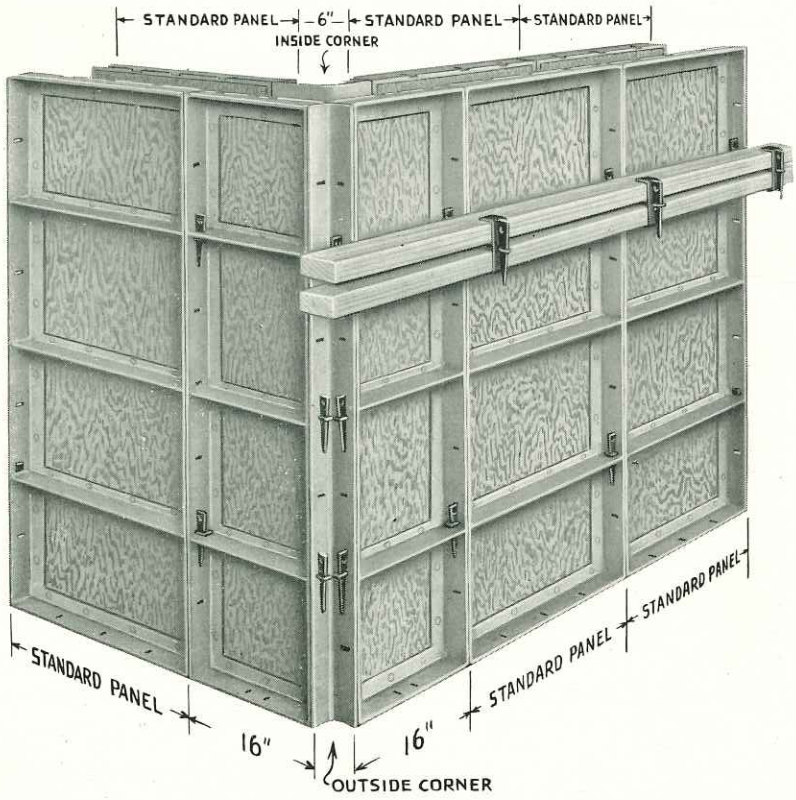


Fig. 1
Inside Corner
All-magnesium

Fig. 2
Outside Corner
Magnesium



All corners require inside and outside corner pieces, Figs. 1 and 2. The inside corner piece is 6" wide each way. Hence, the dimension to be filled in on opposite side is always the wall thickness, plus 6".

In setting up the inside corner, you first attach two standard panels to the corner piece, Fig. 1, passing the connecting bolts through the loops in the ties.

In the lower photo, the wall thickness is 10". Accordingly, a 16" filler is required on each side of the outside corner piece, Fig. 2. If you do not have 16" fillers, you may use two 8" fillers, or a 10" plus a 6" filler; a 14" filler plus a 2" on one side, or a 14" plus a 2" on each side; or else make two fillers on the job, as per Page 12.

Having set these fillers in place, the panels on both sides of the wall now match with each other and you proceed toward the center. The waler ties, if a waler is to be installed, are slipped over the connecting bolts as the bolts are put in place. However, the waler is not put up until one side of wall is erected.

CROSS RIBS ARE SPACED 12" CENTER

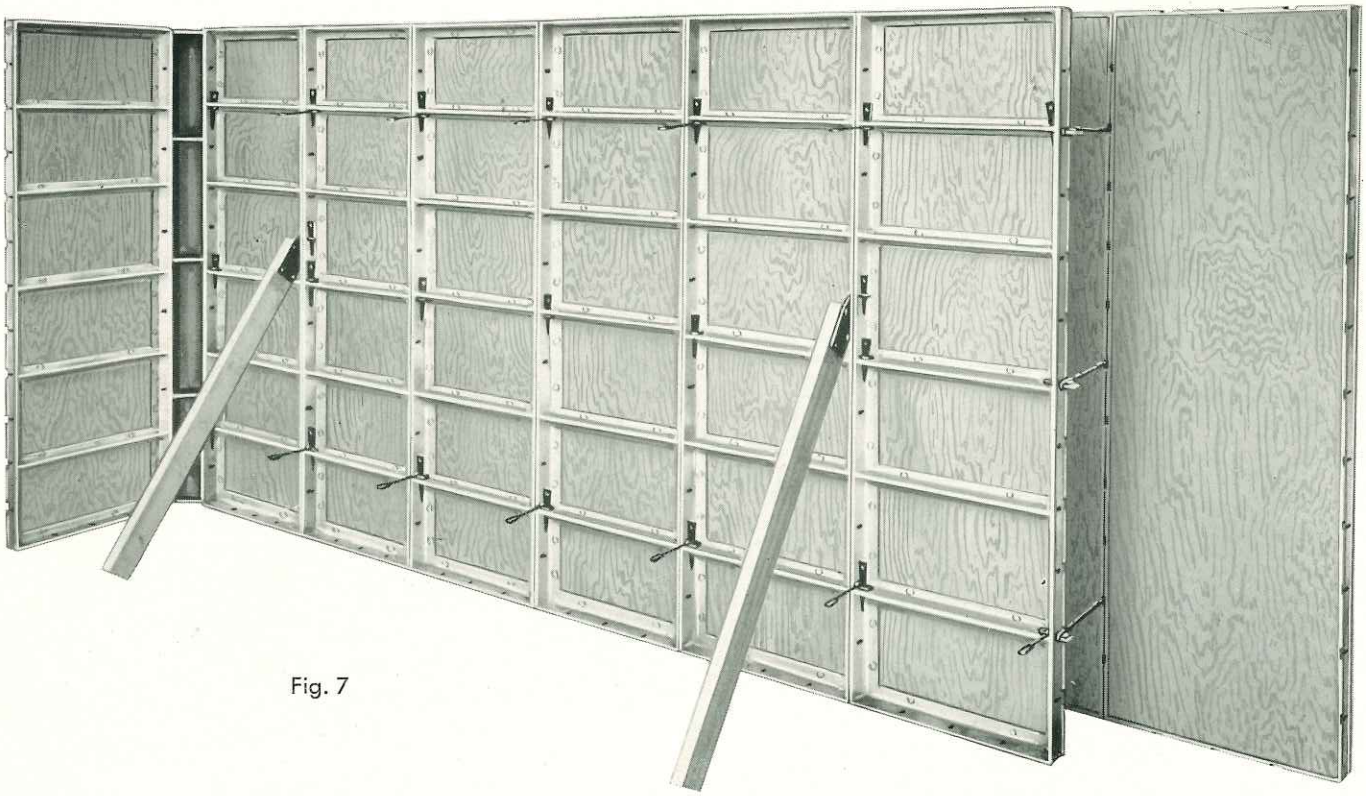
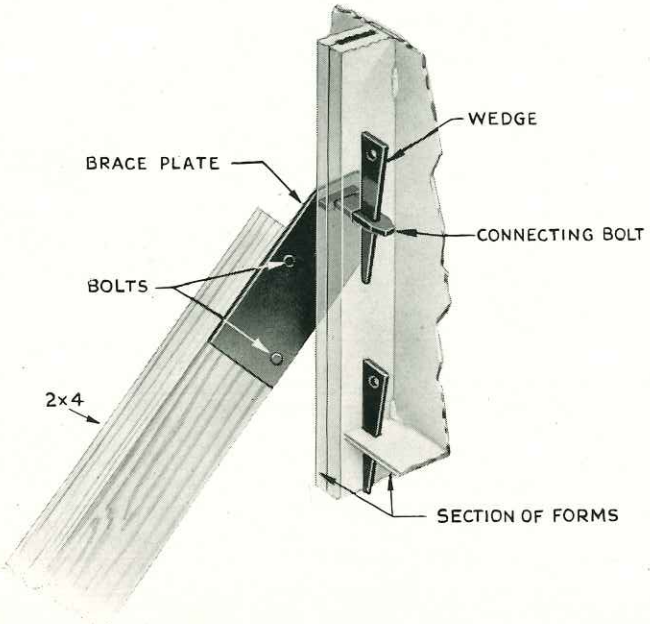
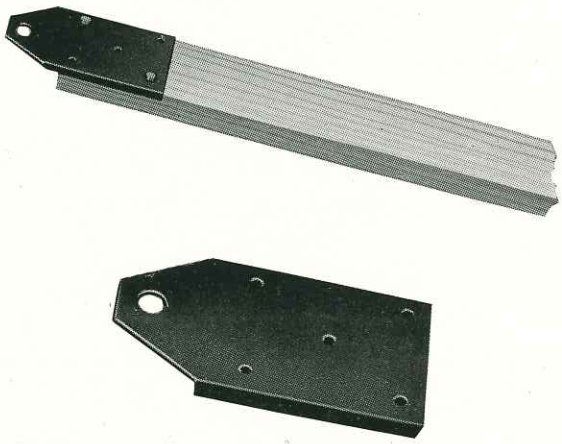


Fig. 7

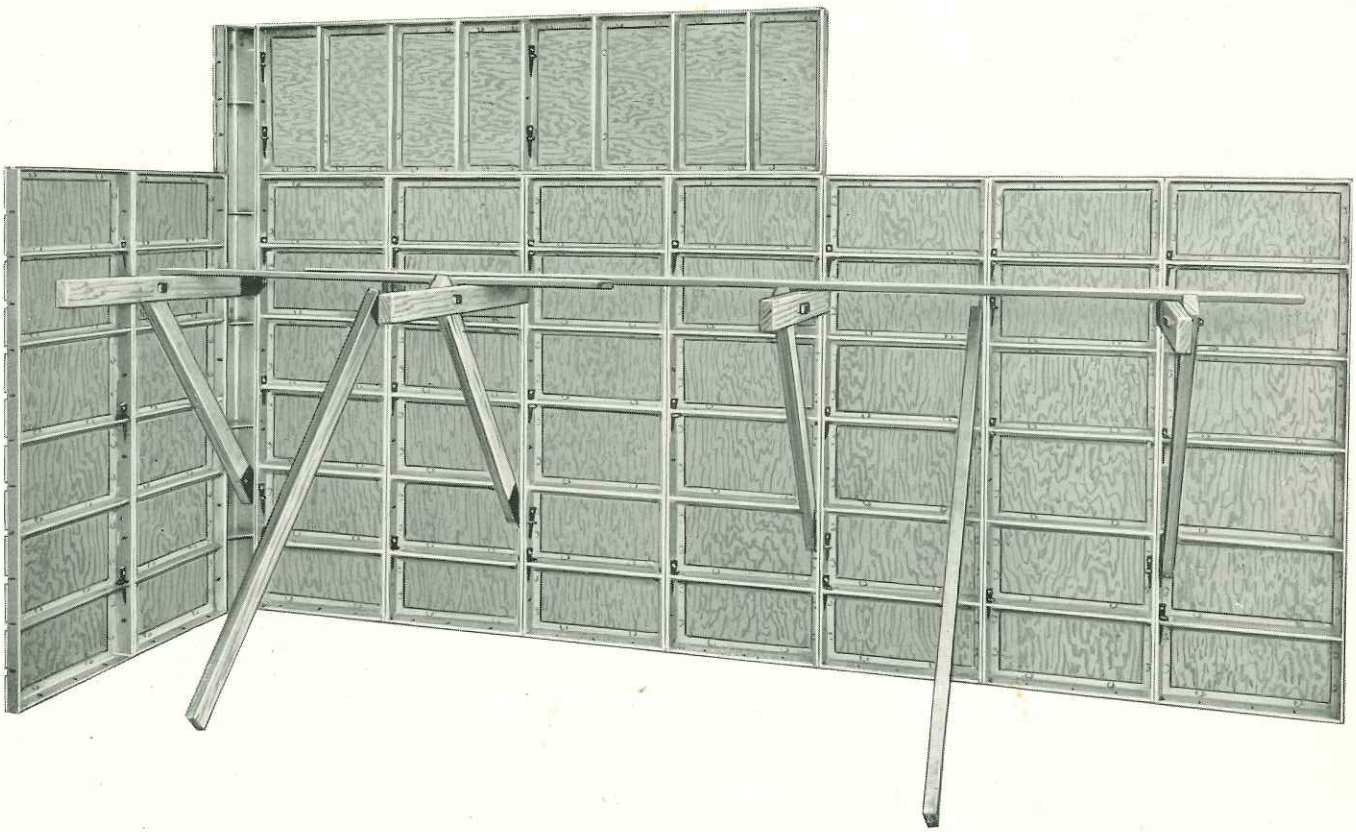
Waler ties are slipped over the connecting bolt before inserting wedge. The walers are not put up until one side is erected. The wale ties are salvaged and may be used an indefinite number of times.



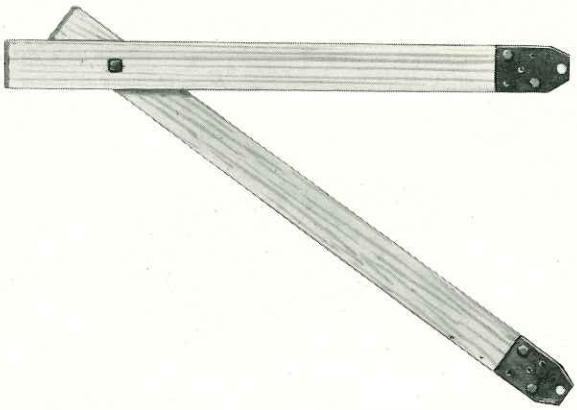


25c with bolts

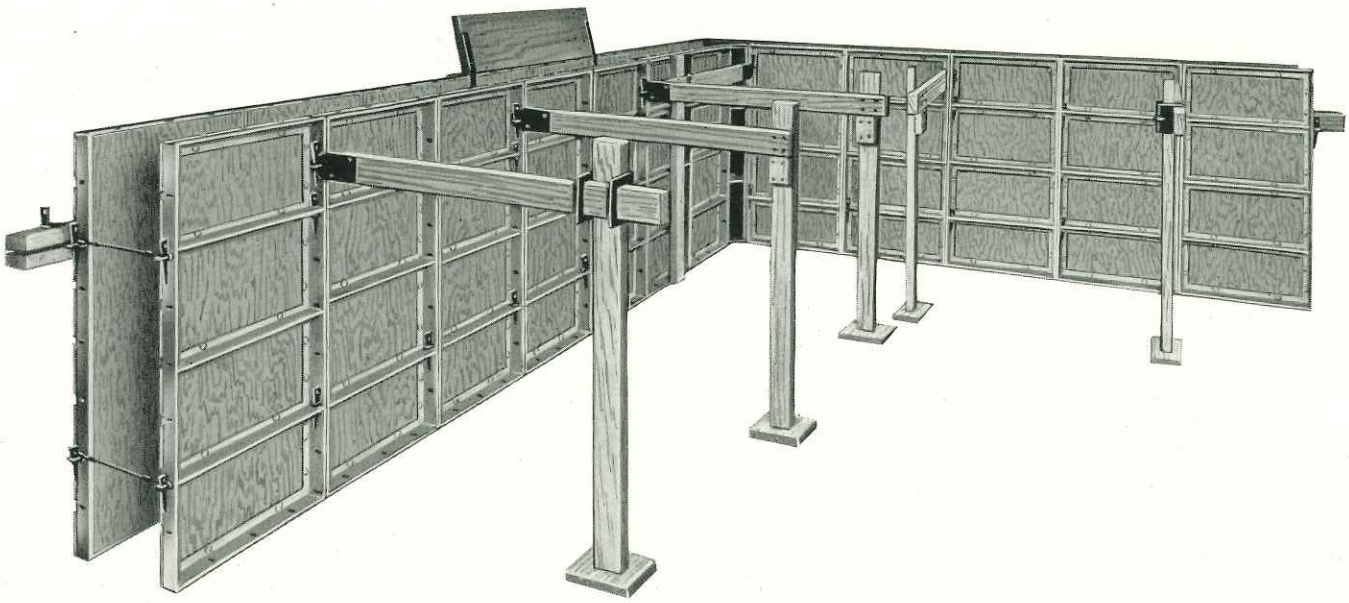
All you need to buy to make braces as shown above is this steel plate.



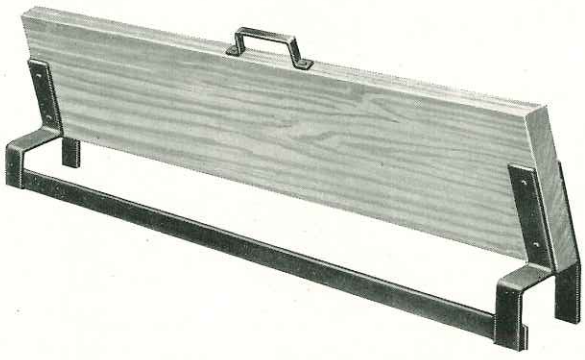
PIVOT BOLT



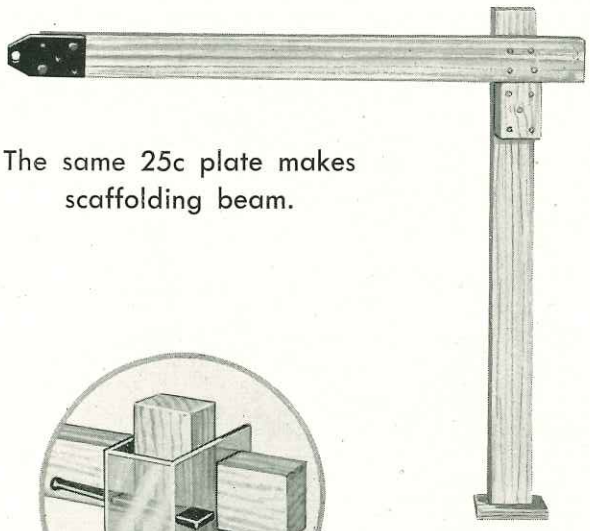
The steel plate shown on opposite page when nailed (or better, bolted) to piece of 2"x4" is used first for brace, and second to make scaffold as illustrated above.



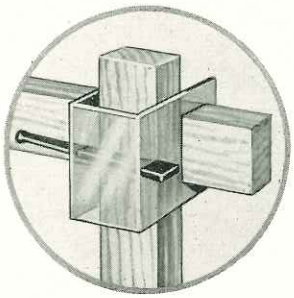
Framework for runway made from braces Page 7, with pieces of 2"x4"s.



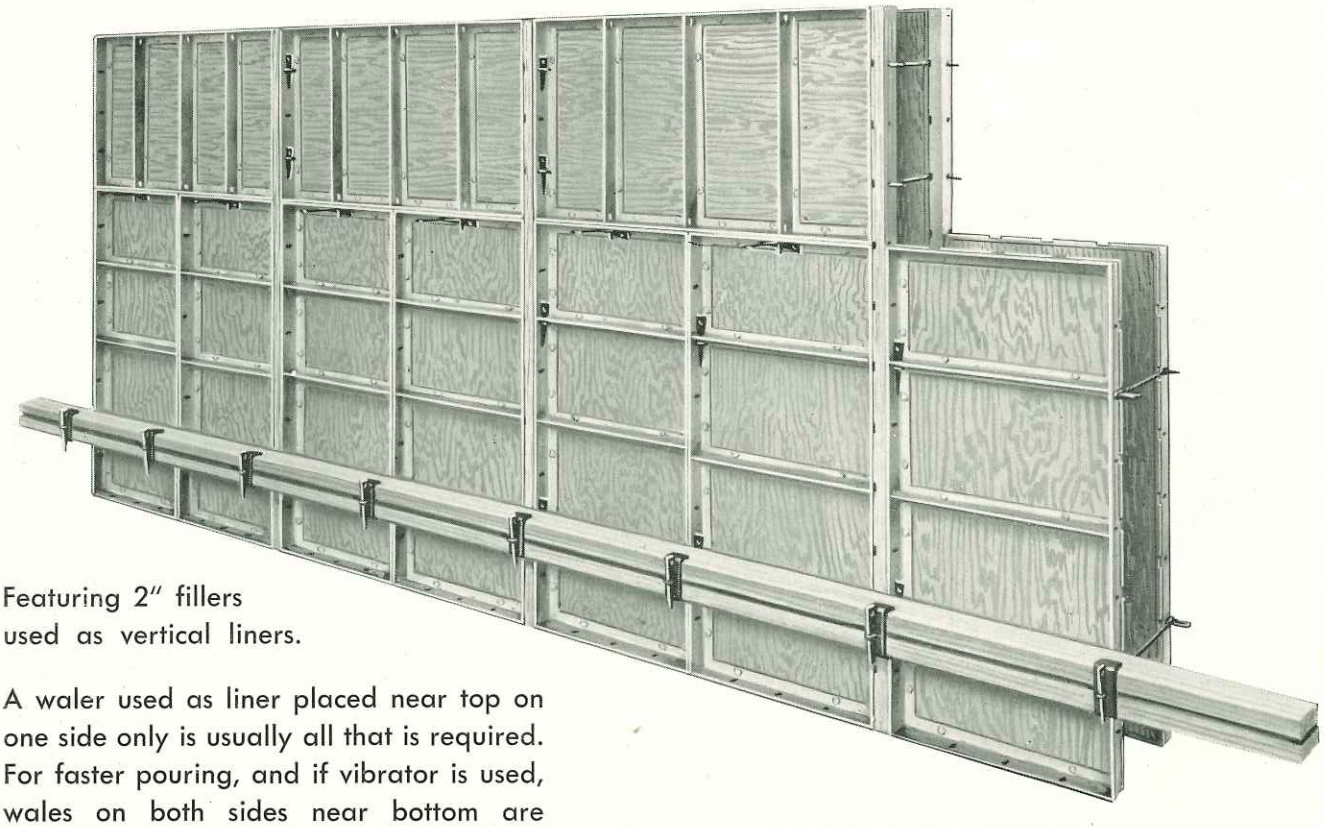
SPLASH BOARD



The same 25c plate makes scaffolding beam.

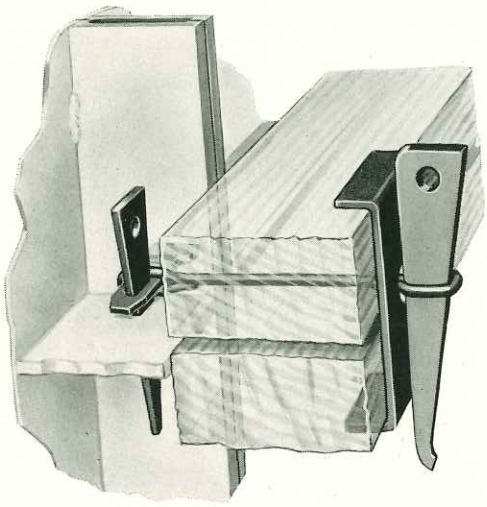


This clamp eliminates need for any nails.



Featuring 2" fillers
used as vertical liners.

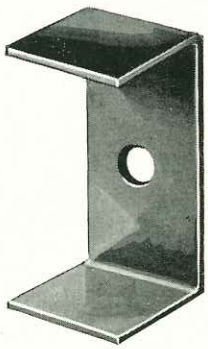
A waler used as liner placed near top on one side only is usually all that is required. For faster pouring, and if vibrator is used, wales on both sides near bottom are necessary.



WALER ASSEMBLY

The lumber is standard 2"x4"

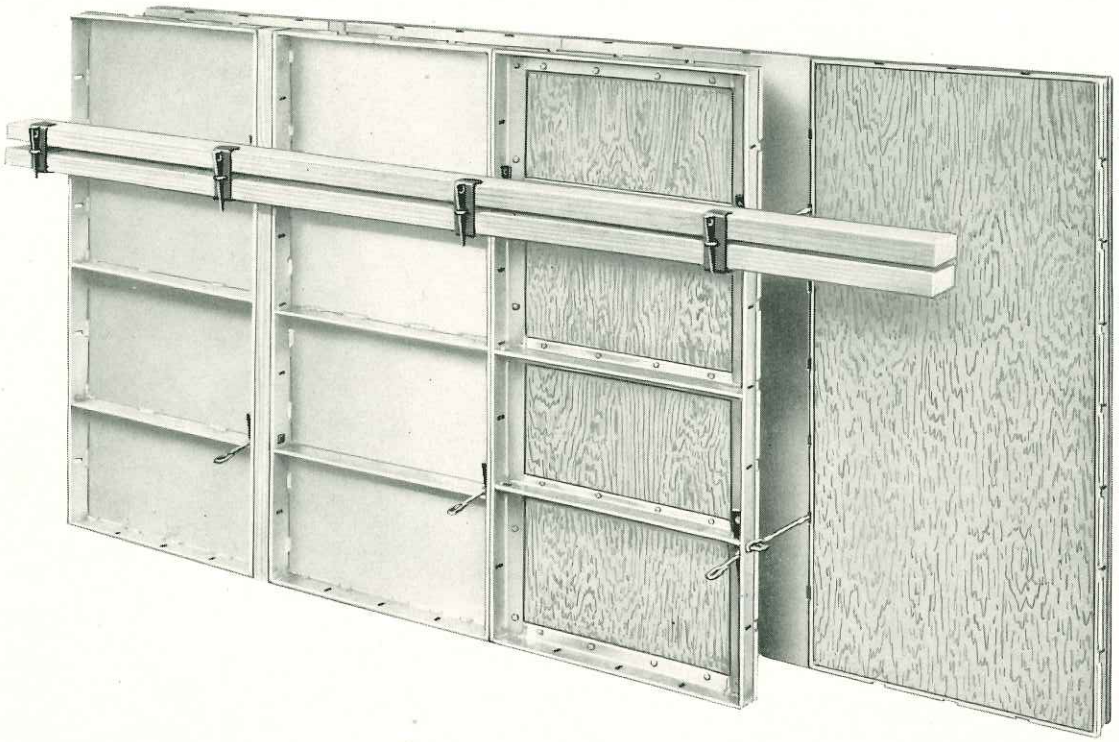
LINER OR WALE TIE



LINER OR WALE U PLATE

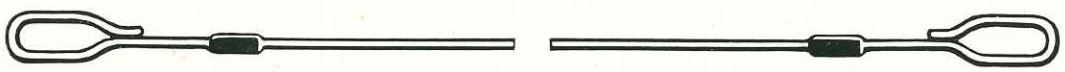
TIGHTENING
WEDGE

PLYWOOD FACED PANELS AND FILLERS WITH MAGNESIUM FRAMES ARE INTERCHANGEABLE WITH THE ALL-MAGNESIUM PANELS, AS HERE SHOWN.



Featuring interchangeability of the plywood faced panels in magnesium frames with the all-magnesium panels. Featuring also 2" fillers.

2" fillers are made from a piece of 2"x4" lumber cut 2½" wide. 1" fillers are made from 1" boards cut 2½" wide. Are used to meet dimensions; also as vertical liners.



SYMONS FORM OR WALL TIE

A round tie has a decided advantage in the breakback feature. In the Symons tie, you have only to run one of the wedges through the loop in the end, give a half turn, and tie snaps at point of greatest resistance, which is the beginning of the flat part in the tie.

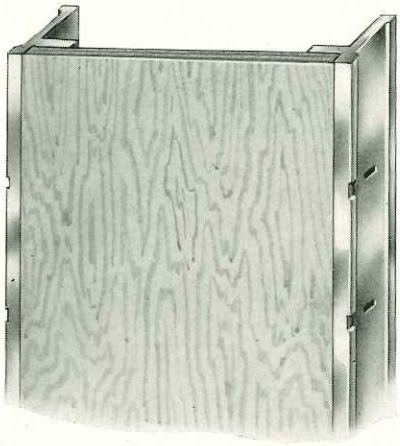
IN ORDERING TIES, WALL THICKNESS ONLY IS REQUIRED.

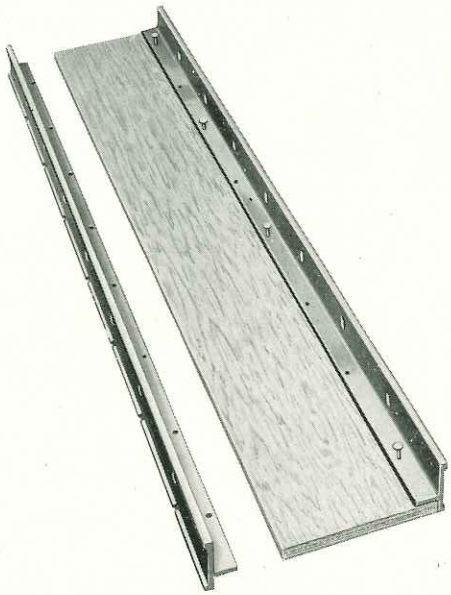
DO NOT BREAK OFF TIES UNTIL THE CONCRETE IS FULLY SET.

NO WAITING AROUND FOR MISSING FILLER. EASILY AND QUICKLY MADE ON JOB.

FILLERS NOT OVER 12" IN WIDTH MAY BE MADE ON THE JOB, WITH ANGLES, PLYWOOD, AND SPLIT RIVETS FURNISHED FOR THAT PURPOSE.

SPLIT RIVET
Actual Size





THE SPLIT RIVETS USED IN FASTENING THE PLYWOOD TO THE FRAME ARE EASILY DRAWN WITH CLAW HAMMER AND FACING REVERSED, OR NEW PLYWOOD INSTALLED.

THIS PHOTO, FIG. 8, ALL-MAGNESIUM, IS DUPLICATE OF FIG. 7, PAGE 7, WHICH IS PLYWOOD FACED.

PANELS ARE INTERCHANGEABLE AS SHOWN PAGE 11.

ALL-MAGNESIUM CATALOG SENT ON REQUEST.

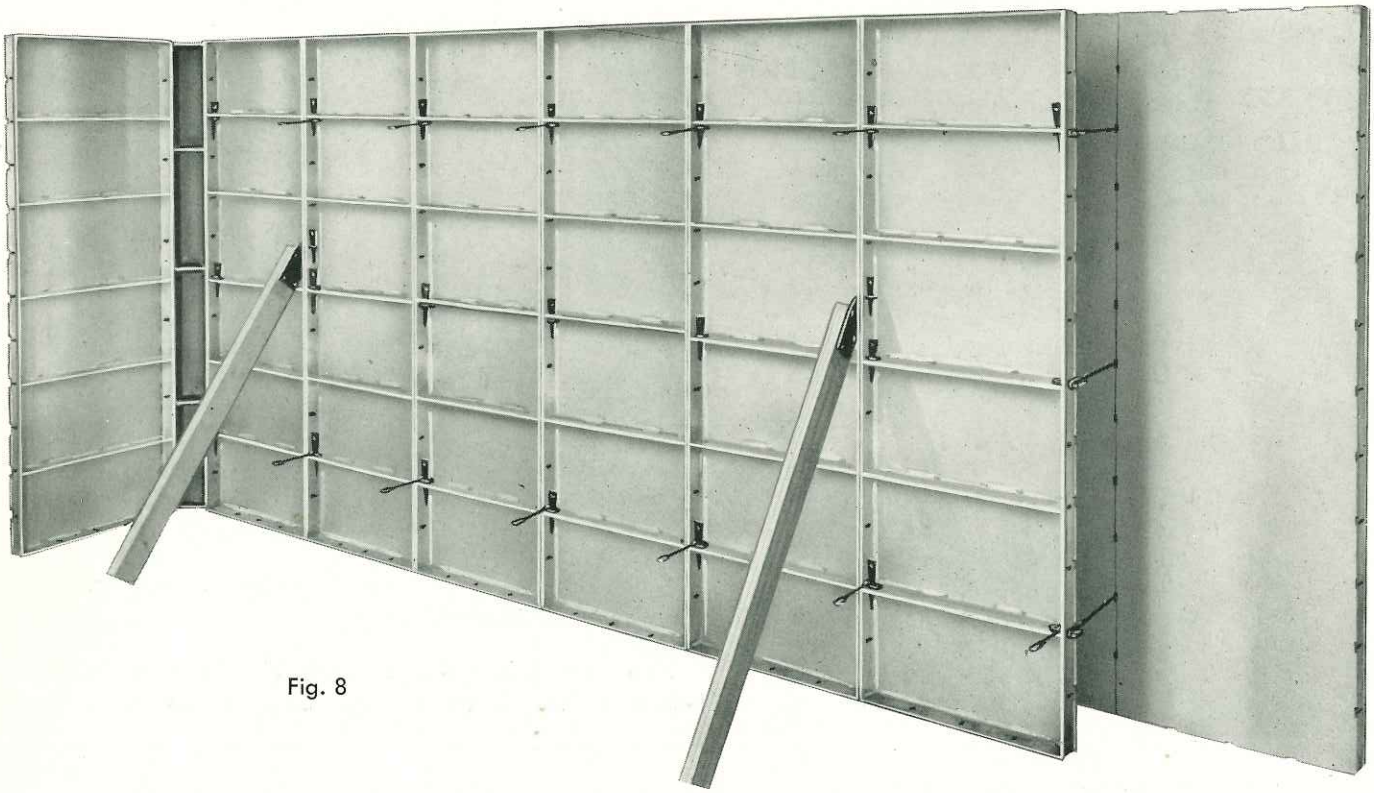
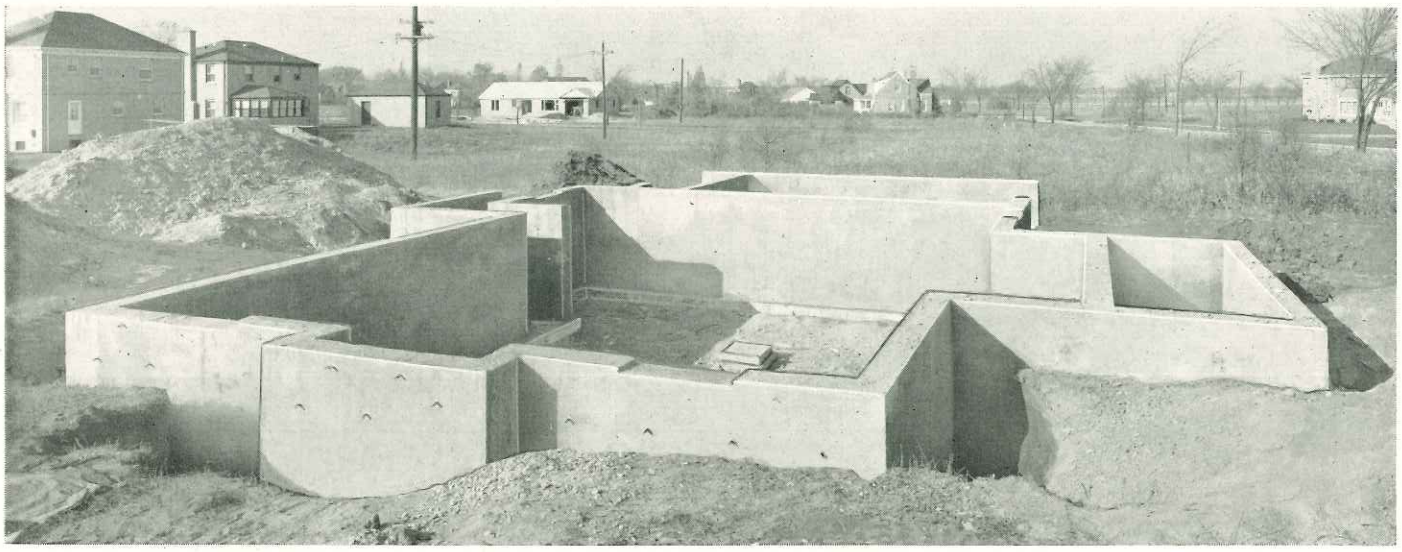


Fig. 8



27 CORNERS IN THIS JOB

Big savings effected in complicated and difficult jobs, all made easy with Symons system.

In looking over this catalog, you have noticed that our panel system for concrete construction is much the same as you have been using. Accordingly, your superintendent and carpenters are familiar with the setting up and taking down of the forms. In the Symons system, however, there is this difference, the tie rods are anchored from the sides of the panels; they do not pass through. The advantage is that you save the time spent in fishing for the tie openings in the opposite panel. Also, in taking down the forms, you have the decided advantage in that as soon as the connecting bolt to which the ties are anchored is removed, and the panels are broken loose from the concrete, they may be lifted straight up, they do not have to be pushed away and disengaged from the ties, as the ties do not go through the panels.

The tie rod is similar to what you have been using; it has the breakback feature, but instead of spreader washers that interfere with the feeding through of the ties and that makes necessary large holes in the panels, the Symons tie has looped ends through which the connecting bolt for connecting the panels is passed, making a combined spreader and tie and doing away with the necessity of making any holes in your panel.

GENERAL DIRECTIONS FOR SETTING UP

Before proceeding, determine from layout just what is required in the way of panels, fillers, and corner pieces. Make sure that every part needed is on the job. This is very important and will save delays, speed the job and lower the cost.

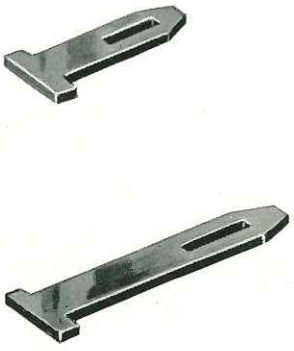
The different steps are as follows:

1. Oil the forms, any thin oil except if calcium chloride is used as antifreeze, use "Dromus B" oil furnished by us or purchased from the Shell Oil Company at about 50c per gallon.
2. Erect corner panels as per instructions on Page 6. Plumb and brace. From the corners, work toward the center, running the connecting bolts through loop ends of ties.
3. Where walers are used for alignment only, one near top of one side is usually all that is needed. The waler tie is slipped over connecting bolt before inserting wedge; however, wales are not put on until one side is up.
4. After reinforcing steel has been placed, and frames, boxes, inserts, sleeves, etc., have been installed to the one face of the wall forms, erect the opposite face of the wall.
5. In stripping, remember the forms cost money. Take care of them.

SHORT CONNECTING BOLT

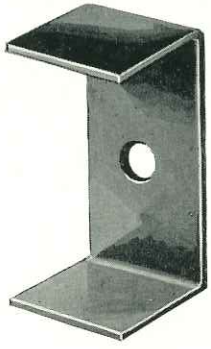
SPLIT RIVET
Actual Size

TIGHTENING WEDGE



LONG CONNECTING BOLT
Used only with 2" fillers

LINER OR WALE TIE



LINER OR WALE U PLATE

415